

## FOOD ENVIRONMENT IN HEALTHCARE

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*ABSTRACT: The public relies on health care professionals to provide solutions to chronic disease. With chronic disease prevalence rates continually increasing, a public health response in prevention is needed. Maintaining one's health is dependent upon diet and nutrition, in addition to physical activity. Dietary and nutritional behavior that prevents disease and promotes health is directly linked to the quality of food consumed. The lack of knowledge and access surrounding quality nutrition is an increasing concern both within healthcare and the community at large. Currently, hospital administrations are signing contracts with fast food corporations and processed food suppliers, skewing an assumed alliance with healthy living requirements for chronic disease patients. By hosting a counter productive food environment, medical facilities fail to align with patient's nutritional behavior requirements.*

*Medical students receive very little, if any, nutrition education in medical training. Medical administrations harness the ability to promote healthy diets but are failing to educate and motivate patients. Moving forward changes in policy development, healthcare food environments, and medical school nutrition education can realign with public health disease prevention/health promotion initiatives. By addressing the point of chronic disease intervention, medical facilities can also act as a point of public health intervention, we build trust with patients and the community by demonstrating beneficence.*

Public health has led the development of vaccines and proper sanitation, both of which have greatly reduced infectious diseases in the United States, saving millions of lives. Now, public health faces a new era: combating the rising incidence of chronic diseases such as cancer, diabetes, obesity, and cardiovascular disease. Poor nutrition is a leading risk factor for the growing number of chronic illnesses in the United States and is the reason that the Affordable Care Act called for an increase in nutritional awareness, assessments, and counseling (Kris-Etherton et al., 2015). Still, the importance of nutrition is often overlooked in areas of medical practice, education, and the food environment within healthcare settings. To fully address the growing incidence of chronic disease in the United States, the food environment in healthcare must be assessed and reformed to include proper education for medical professionals and nutritionally dense foods in hospital cafeterias.

Dietary interventions have been known to reduce the incidence, severity, and associated morbidity of hypertension, diabetes, and some cancers. Nutrition not only shows potential in the treatment and prevention of chronic disease, but is also safer and more affordable than pharmacologic interventions (Kris-Etherton et al., 2014). Research increasingly shows that proper nutrition is critical for the prevention and treatment of chronic disease, yet medical professionals, and more specifically medical doctors, do not receive the adequate training to counsel in nutrition. The Accreditation Council for Graduate Medical Education, which oversees specialty programs, requires very little nutrition education for most specialties. Without proper education, health care professionals are not getting all the tools they need to succeed in furthering the health of patients and the public.

Healthcare settings are an intervention location primed for demonstrating to the public what healthy eating looks like. Fast food restaurants

provide foods high in salt, fat, and sugar, which are extremely unhealthy and counterproductive in the treatment of chronic diseases. Therefore, the presence of such franchises within the walls of medical facilities is, at the very least, troubling.

Although proper nutrition is greatly lacking in the United States, some medical schools and hospitals are taking the call to action. Nutrition education equips graduates to counsel patients in food intake and preparation. These steps are critical to changing the current food system within health care and are allowing for more changes to be made all over the United States.

## **Literature Review**

### *Nutrition & Chronic Disease*

Understanding the risk factors for chronic disease is a pathway toward a prevention framework. Lifestyle behaviors that increase a patient's risk of cardiovascular disease include unhealthy diet, physical inactivity, obesity, excess alcohol and tobacco use (Centers for Disease Control and Prevention, 2015). When a cancer patient seeks advice on diet guidelines, they are encouraged to eat smaller portions, choose vegetables and legumes, while avoiding calorically dense foods such a fried potatoes, ice cream, and sweetened treats (American Cancer Society, 2015). A newly diagnosed diabetic will likely look to their pantry as a point of management, they will be encouraged to eat less unhealthy fats, keep portions in perspective, and reduce their sodium intake (American Diabetes Association, 2014). This advice is valid in the treatment and prevention of disease, as it targets the reduction of obesity and maintaining a healthy body weight.

The consensus is in, a range of interventions for treatment and prevention of diabetes, among other chronic diseases, requires innovative interventions (Kyle, 2015). The American Medical Association, National Institutes of Health, Obesity Society, American Association of Clinical Endocrinologists and the Endocrine

Society have joined in one communal voice to give precedence to combating obesity related disease with evidence-based care opposed to continually throwing prescriptions at a lifestyle disease (Kyle, 2015). Intensive behavioral therapy is a primary tool for evidence based obesity care (Kyle, 2015). Aligning nutrition behavior guidelines from the prestigious diabetes, cancer and cardiovascular disease organizations previously mentioned, with intensive behavioral therapy is supported within the constraints of the doctors office. The next step is to reinforce those same behavioral values within healthcare food environments.

### *Current Food Environments*

It is apparent that the current food system within the healthcare setting is flawed, creating a missed opportunity for public health improvement. Cafeterias within hospitals not only feed the patients but also the visitors and medical staff. The Physicians Committee for Responsible Medicine (PCRM) reports that hospitals are signing lease contracts with fast food companies. In recent years the number of hospitals working with fast food restaurants and large corporations has been on the rise (Physicians Committee for Responsible Medicine, 2015). The PCRM is exposing hospitals, calling for responsibility and compares the collaboration of fast food and hospitals to allowing physicians to smoke (Physicians Committee for Responsible Medicine, 2015). As previously mentioned, fast food is high in fat, sugar, and salt, all of which are harmful to the health of patients, visitors, and hospital workers. These sources are especially dangerous for patients with chronic disease. The PCRM recommends a shift to food such as fresh produce and whole grains, which will help in the prevention and recovery from chronic disease. Healthcare facilities are places where patients go to regain health. Increasing patient exposure to chronic disease risk factors does not align with public health prevention initiatives.

With the high volume of public interaction within hospitals, food service providers must

respond to customer demand to stay in business (Stanton, 2015). As nutritional knowledge becomes increasingly widespread, more patients will look for healthier options, which encourage and reinforce healthy food choices. Preference for healthy food options is a current and increasing trend, which indicates food behaviors are moving in a healthier direction (Stanton, 2015). This momentum provides an advantage in encouraging physicians, nurses, and dietitians to maximize the point of intervention with the public, to educate and provides sources for long term benefits of healthy food options.

### *Lack of Medical Nutrition Training*

Currently, the majority of healthcare professionals receive insufficient nutrition education, which has created a gap in patient treatment plans aimed at healthy lifestyle behaviors (Kris-Etherton et al., 2015). The Affordable Care Act has shifted focus onto prevention and treatment of chronic diseases (Kris-Etherton et al., 2015). “Policies and programs that support a public health focus on prevention and treatment of chronic diseases through better nutritional awareness, assessments, and counseling,” (Kris-Etherton et al., 2015, p.85). The gap in professional staff nutrition education is attributed to a competition for time, indicating other subject areas are more dominant in medical school preparation (Kris-Etherton et al., 2015). However, with nutritional knowledge, healthcare professionals become intervention points for patients to learn about disease-targeted nutrition and gain the proper knowledge to prevent chronic disease, all of which support the ideal healthy lifestyle.

Numerous health benefits associated with proper diet and nutrition further support nutrition intervention at the health care level (Kris-Etherton et al., 2014). Current medical degree requirements provide physicians with less education in nutrition than nurses (Kris-Etherton et al., 2014). The importance of advocating for nutritional patient care and the health of the patients is a top priority (Kris-

Etherton et al., 2014). Registered dietitians are a great resource and are often easily accessible to other healthcare professionals, researchers have suggested utilizing dieticians as onsite educators for physicians and other healthcare professionals (Kris-Etherton et al., 2014).

Progress and importance is being supported amongst current medical students. According to a medical student in Chicago, patients are more and more concerned about preventing disease before it occurs (Eng, 2015). While the demand for medical professionals to counsel patients in nutrition is increasing, many medical doctors continue to lack nutritional education and do not feel comfortable discussing it with their patients (Kris-Etherton et al., 2014). Health care professionals are often seen as role models for the public and have an opportunity to promote proper nutrition by aligning with public health disease prevention interventions.

### *Public Health Interventions*

It is imperative that as knowledge increases regarding the role of nutrition in the prevention of chronic disease and promoting health, interventions in medical education and the food environment within health care follow suit. Current movements within both health care and education are playing an important role in increasing awareness and bringing about change. The article *Menu of Change: Healthy Food in Healthcare* states, “Changing the culture around health and food habits is one of the most difficult things to do. It is important to understand that it is a long journey...Changing culture is about chipping away at it one step at a time, always finding a new way to involve a new group of people,” (Kulick, Nathanson, & Sirois, 2011). Fortunately, small changes are being made to improve the current food environment.

After recognizing that current, practicing physicians are not equipped to advise their patients on proper nutrition, medical students at the University of Chicago set out to find their own nutrition education (Eng, 2015). In their own time, without credit, students began

taking culinary classes with Dr. Sonia Oyola and Dr. Greeta Maker-Clark (Eng, 2015). The University of Chicago does not offer culinary classes in their medical program, but students valued the importance of this type of education for their future as clinicians and their ability to effectively treat, diagnose, and counsel patients (Eng, 2015). This class, modeled after Tulane University, required a culinary nutrition course, and is therefore unique as it teaches components of proper diet in conjunction with practical preparation of healthy foods (Eng, 2015). It is students like these that are willing to take initiative over their own education and who recognize their responsibility to improve health who will ultimately bring about change.

Approaching change in the food culture within hospitals is no small feat, but is necessary for improving the health of patients and the medical professionals who oversee them. Health Care Without Harm, an organization dedicated to responsibly advancing medicine worldwide, stresses the importance of providing hospital patients, visitors, and staff, with healthier food options (Health Care Without Harm, n.d.). They are advocating to incorporate local and sustainable foods, at an affordable price, making it easier for people to make healthy food choices (Health Care Without Harm, n.d.). Two hundred and fifty hospitals have signed a pledge with Health Care Without Harm and are now vowing to provide antibiotic and hormone free foods as well as fresh produce (Conis, 2009).

## **Plan of Action**

### *Policy*

Looking locally, the greater Seattle area is home to more than twenty-three major medical centers, identifying the region as suitable and optimal for maximizing the benefits of a program that brings healthy food behaviors into healthcare. Moving toward a healthier, less toxic food environment will require changes in current policies such as the hospital food system, sourcing and education intervention.

By combining these areas of focus, the Pacific Northwest can lead the medical world by improving the nutrition and health of our patients, community and providing a successful example for the rest of the country.

This Healthy Food Program will require an observational study, both quantitative and qualitative, as well as implementation of continuing education courses in nutrition and culinary medicine. We propose an observational study at each participating area medical center to assess the current food environment, health ratings of food offered, and measurement of toxic exposures. Once areas of concern have been identified within the current food system, the Healthy Food Program will make recommendations tailored to fit the needs of each medical center.

As the food environment concerns are addressed and remedied, it will also be essential to increase physician, nurse, and dietician knowledge in nutrition and culinary medicine. The program plans to create continuing education courses in culinary medicine available to all medical staff. We plan to approach the University of Washington School of Medicine to incorporate culinary medicine courses into required electives for first and second year medical students. As the program improves, knowledge of the relationships between disease, medicine, and nutrition will become intrinsic. Professional staff will be prepared to approach dietary solutions to health conditions with a multidisciplinary perspective. As staff offer solutions to patients, they will in turn be equipped with essential tools and knowledge which can be leveraged in their own life.

### *Food Environment*

With results from the observational food environment study, the Healthy Foods Program can target areas of needed improvement. Generally, medical centers will then tend to follow the example of hospitals which have made the change to organic produce, hormone free, and antibiotic free protein sources.

Implementing organic produce in the cafeteria as well as direct patient service, supports public health messages of healthy lifestyle. Heavily processed foods containing high amounts of fat, sugar, and salt would no longer be available in the cafeteria.

With fast and processed food removed and local organic produce supplemented, the program will also see a reduction of packaging, plastics, and chemicals used to preserve produce. Reducing exposure to harmful chemicals will support the health of patients and the health of the environment as well. The most vulnerable populations in society often use emergency rooms and hospital visits as their primary source of health care. Incorporating organic foods into the food service system allows medical centers the opportunity to intervene with the larger general public as well. Within this framework medical centers will be inline with public health and empowered to lead the community by example.

### *Education*

A robust Healthy Food Program has many demands, making cost effective budgeting a priority in maximizing the effectiveness of a new food environment. Staff must be educated in order to address patient needs for nutrition information specific to their health. Dieticians must be given additional opportunities for nutrition and culinary medicine education. Future hiring will emphasize certified nutritionists who can function both as a nutritional expert for patients, and also as educational interventionists supporting public health initiatives.

Professional staff taking on nutrition roles will become a link between tertiary and preventative care. This sends a message to patients and the public that their conditions can be improved by developing healthy lifestyle habits, supported and encouraged by their local medical centers in an effort to reduce the need for recurring visits. Another important element is that professional staff will be better prepared to make referrals to nutrition or naturopathic specialists to customize

a preventative or restorative health plan for patients. Dieticians can recommend support groups, community services, and rehabilitative health specialists.

### **Conclusion**

Collectively, the above action items support public health goals of disease prevention and health promotion. Both components offer vital public and environmental health services that vulnerable populations (i.e. “un-doctored”) may not have access to. Patients with primary care providers are unlikely to receive Health Food Program resources. Implementing this program into medical centers as a routine treatment, and applied to patients in crisis, can maximize the opportunity for intervention and positive impact for those who need it most.

Healthcare professionals and institutions have always had a large influence on the health and well-being of others. Providing these experts with the most current information and a well-rounded education is key in the spread of awareness and promotion of healthy lifestyles. In order to see our plan through, we first must educate those who are trusted most. Empowering medical schools to integrate nutrition education into programs is imperative. Replacing fast food restaurants with healthy food environments that utilize locally grown produce provides quality options and helps the health food suppliers prosper. The alignment of nutrition, chronic disease treatment, retail food environments, and medical school education with public health disease prevention programs builds invaluable trust with our patients and broader communities.

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